



Maine School IPM News

MAINE DEPARTMENT OF AGRICULTURE, FOOD, & RURAL RESOURCES

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Eastern Equine Encephalitis (EEE)

EEE is a serious disease transmitted to people and other animals by mosquitoes. This year, EEE has reached outbreak levels in Maine.

What does this mean for schools? Maine CDC and its consulting experts recommend:

- Children on outdoor field trips and participating in other outdoor activities for a significant amount of time when the temperature is above 50 degrees should be encouraged to:

- **Cover up** with long sleeve shirts, pants, and socks;

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Back-to-school means notification!

All Maine schools are required to notify parents and staff of the school's IPM policy within the **first two weeks of the start of the school year**. The notice must state:

- * that a school integrated pest management policy exists and where it may be reviewed.
- * that pesticides may periodically be applied in school buildings and on school grounds.
- * how parents, guardians, and staff will be notified any time pesticides are used on properties used by the school.
- * where a report of prior pesticide applications and information about the pesticides is available for review.
- * where a copy of the Pesticides in Schools (Chapter 27) regulation can be reviewed

Schools that fail to send the required notice are liable and subject to fines. Sample notification letters are available at www.thinkfirstspraylast.org/schoolipm.

Turf: Grubs

Some of the most prevalent turfgrass pests are white grubs, the C-shaped larvae of a large group of beetles known as scarabs. The three important species in Maine that cause considerable turfgrass damage are the Japanese beetle, May or June beetle, and the European chafer. The June beetle is a native species, but the Japanese beetle and European chafer are both foreign invaders.

White grubs in turf share similar life cycles. In the summer, adults emerge from the soil and feed on foliage and/or flowers before mating and depositing their eggs in turf. The eggs hatch in August and larvae feed on grass roots until October. As soil temperatures cool, the grubs move deeper into the soil to overwinter. The following April or May, they return to the surface and resume feeding before emerging as adults.

Prevention is the best offense when it comes to grubs. Avoid planting roses, grapes, lindens, crab apples, and Japanese maples around high maintenance turf areas. Better choices include dogwood, red oak, ash, magnolia, juniper, spruce, lilac, and forsythia. Avoid the use of Japanese beetle traps, which can draw in beetles from surrounding areas making

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your turf a prime target for damage.

Monitor for white grubs by sampling several locations across an area of turf. Begin sampling in August when grubs are easily seen and actively feeding, but before signs of injury are visible. Sample for Japanese beetles and European chafers in grassy sunny areas and high quality turf near favorite host plants. Check turf under or near exterior lights for May/June beetles.

Walk in a zigzag pattern across the field, taking samples at 10-20 foot intervals from at least 10 locations. Peel back the turf on square foot samples of sod and inspect the thatch and upper 2-3 inches of soil. Shake the sample and probe through the soil and roots to locate grubs. Count the number and species of grubs found at each sampling site and

record these on a map of the area. Replace the sod after sampling and irrigate thoroughly.

Got Grubs? Now what? If turf can withstand some moisture stress, refrain from watering in July and early August when eggs and young larvae are present. They are very susceptible to dry conditions.

How many are too many? Every field is different, but a rule of thumb says if there are more than 20 Japanese beetle and/or European chafer grubs/square foot in irrigated turf or more than 5-10 grubs/square foot in un-watered turf it may be time to think about intervening. The larger grubs of May/June beetles cause more damage; therefore, treat when there are more than 10 grubs/square foot in irrigated turf or more than 3-5 grubs/square foot in low maintenance turf.

Chemical control is most effective when grubs are very small. Apply spot treatments in late August or early September. Irrigate after application to wash the treatment into the soil. The degree of control is highly variable. Don't forget: IPM regulations apply if pesticides are to be applied on grounds used for school activities.

A very effective and environmentally friendly control is the use of beneficial nematodes. These microscopic worms do not affect humans, animals, plants, earthworms or other non-target organisms. The best time to apply nematodes is when grubs are present and actively feeding in late July to mid-September. For more information on using beneficial nematodes, visit—http://www.oardc.ohio-state.edu/nematodes/turfgrass_pest_management.htm.

Tips & Techniques: Setting Up an IPM Notebook

An IPM notebook should be set up so that the IPM coordinator and the pest control contractor will have easy access to the pest control records for the district. This can be a binder or, for large districts, a file drawer. All your IPM records should be in one location.

Use file dividers to separate the following headings:

- ◇ Policy statement—include IPM plans as they are developed.
- ◇ Certificates—IPM coordinators, CEU certificates, and any necessary training associated with IPM
- ◇ Notifications—copy of the 48 hour posting schedule, parental notifications from the student handbook, statements to staff about pesticide use (optional)
- ◇ Application use records (should be broken down by campus)
 - * These records should identify chemical used (trade name), EPA registration number, where used, amount used, date, time, reason, applicator, name and phone number of contact person.
- ◇ Emergency waivers, including pesticide application use record
- ◇ Pest sightings logs or work order documentation of pest sightings
- ◇ Non-chemical control measures (noting when sanitation, physical, and/or mechanical methods were used, even prevention measures)
- ◇ List of structural and landscape improvements by campus. Once areas are fixed, they can be placed in the section listed above.
- ◇ Copies of all pesticide labels and MSD sheets (could be placed in own notebook)
- ◇ Pest control contract (optional, but nice to have)
- ◇ Incidental Use training and pest control records
- ◇ Information requests and complaints about pesticides
- ◇ List of parents who want to be notified prior to pesticide applications

Janet A. Hurley

Bees and Wasps

Although classes have started and the weather is getting cooler, its not yet time to let up your guard against stinging and biting insects. Stinging insects are of special concern in schools due to the danger of allergic reactions in some people. The best defense is vigilance.

Yellowjackets and hornets are members of a large group of wasps known as social wasps or paper wasps. Wasp colonies are killed by freezing temperatures in fall and winter. Until then, monitor for wasp nests every two weeks until mid- to late October.

Look for paper wasp nests on the eaves of buildings or playground equipment. Look for yellowjackets entering or exiting from nests in the ground (often from under shrubs, logs, or rock piles); hollow trees; branches of trees and shrubs; under eaves; hollow fencing, playground structures, and meter boxes; and walls.

Nests located where they can be avoided do not need to be treated. Rope off nest areas if possible and instruct children not to disturb the nests.

Nests should be removed if they are located in areas where disturbance is inevitable or where there is a persistent problem on athletic fields or around outdoor food service areas. To avoid the risk of stings to students and staff,

hire a professional to remove the nests.

As summer wanes and natural food sources become scarce, dumpsters become very attractive to wasps. Therefore, it is important to practice good sanitation. Make sure all trash containers are tightly closed and all waste is sealed in plastic bags before disposal. Empty trash frequently and wash dumpsters on a regular basis. Clean up and dispose of trash promptly after outdoor events where food is served.

Prevent wasps from building nests by closing openings in outside walls, playground structures, fences, pipes, hollow fence posts, meter boxes, wall voids, etc. Do not seal the entrance to an active nest until the colony is destroyed.

Trapping may catch hundreds to thousands of wasps and still have little impact on the number of wasps around the school yard. However, the attractants in jar traps can draw wasps away from sensitive area. Place traps out of children's reach near dumpsters or other food sources. Do not place traps on playgrounds or in areas not normally attractive to wasps. Empty traps when full by placing them in a freezer or in a black plastic bag placed in the sun for a day to kill trapped yellowjackets. Wash traps in soapy water and refresh the bait.

Bees are generally mild mannered and pose a threat only if

handled. They are often found on clover, wild flowers, and ornamental plantings. Because they are important pollinators, it is not advisable to apply pesticides to lawns, athletic fields, or ornamental plantings where bees are active. To avoid stings, do not allow children to walk bare-footed in these areas.

Occasionally, honeybees will swarm to seek a new site for the growing colony. Because there is no nest to defend, bee swarms are usually docile if left alone. It is common for a swarm to rest for several hours or an entire day before flying off to a new nest site. However, swarms that have clustered in an area for several days may become defensive. If swarming bees have moved into a wall void or other opening, they will defend themselves when disturbed.

Schools that experience swarming bees can call the Division of Plant Industry, 207-287-3891. The Division maintains a Swarm List which is a list of beekeepers who are willing to retrieve swarms. If the bees present an unacceptable threat, call the local fire department; they will exterminate the swarm.

Remember, bees and wasps are beneficial and are only considered pests when human activity encroaches on their territory.



Eastern Yellowjacket. Gary Alpert, Harvard University, Bugwood.org



Paper Wasp. Jessica Lawrence, NC State Entomology Department



Bumble Bee. David Cappaert, Michigan State University, Bugwood.org

Food Service Reminders

Food service personnel can be a valuable asset or a roadblock in your IPM program. However, with a little persuasion and information the kitchen manager can be trained to help you with your IPM program. Here are a few tips to help your kitchen staffs succeed in your IPM program.

Pest prevention in kitchen settings:

Floors:

- * Concrete and brick are best.
- * For tile floors, make sure staff reports cracks, rips, or loose panels.
- * Floor drains should be cleaned regularly with a wire brush or using a specialized drain cleaner to remove food build-up on the sides of the pipes.

Walls:

- * Pre-cast, poured concrete, concrete block, brick, tile, or metal curtain walls should be cleaned routinely.
- * Cracks and openings should be reported immediately.
- * Metal curtain walls can be hollow—do not puncture or drill holes in the walls without caulking or sealing

Windows and Doors:

- * Usually windows should be made of glass block, rather than double paned. In either case, windows should have a tight seal to prevent entry of crawling and flying insects.
- * Doors should be metal with tight fitting seams and good door sweeps. No daylight should be showing underneath the door.

- * Air curtains should cover the entire doorway and have sufficient air velocity to cover top to bottom of door.

Dumpsters:

- * Should be placed on concrete pad, not dirt, to prevent rodents burrowing underneath.
- * Lids and side doors should be closed overnight.
- * Request routine removal of old dumpsters for new ones at least yearly or when they begin to deteriorate.

Storage:

- * Three basic rules to stored products and food:
 1. Store it off the floor.
 2. Keep it away from the wall.
 3. Adopt the first in, first out policy.
- * Don't store items in cardboard boxes—remove as much as possible.
- * Storage shelves should consist of wire metal racks, not wood shelves.

Kitchen Equipment:

- * Should be washed, rinsed, and sanitized daily.
- * At least yearly, equipment should be thoroughly cleaned by:
 - ◇ Removing sides, tops, or panels from mixers, fryers, vents, dishwashers, etc. and vacuuming out dust bunnies and food particles.

Janet A. Hurley

Southwest Technical Resource Center
Texas Cooperative Extension

2009 Workshops Featured IPM Budget Calculator



We want to thank United Technologies Center in Bangor and Portland Arts and Technology Center for hosting our Spring 2009 workshops. These day-long sessions featured Janet Hurley, nationally recognized IPM expert, who introduced a new tool developed at Texas A & M University, designed to help all schools evaluate needs and budget for pest-preventive building and grounds maintenance. This tool was tested using information from schools around the country including four school systems in Maine.

With this free program you can calculate and compare costs of different IPM actions such as installing window screens, replacing door sweeps, or changing cleaning practices. Even if you missed the workshop, you can access and use the calculator at: www.ipmcalculator.com. Check it out!



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and/or

- use a US CDC-recommended effective **insect repellent** containing DEET, picaridin, IR3535, or oil of lemon eucalyptus on exposed skin and/or clothing. The repellent/insecticide permethrin can be used on clothing to protect through several washes. Always follow the package directions. For details see http://www.cdc.gov/ncidod/dvbid/westnile/qa/insect_repellent.htm.

Unless the dusk temperature is forecast to be less than 50 degrees, **limit and even reschedule outdoor group evening activities** such as school athletic events so people are able to go indoors by one hour before sunset, or make sure participants are using and spectators know to use **insect repellent**.

The Maine CDC further recommends that since we anticipate the risk from EEE to continue after this year, schools should consider implementing mosquito control strategies that include public education and the hiring of a licensed commercial pesticide applicator company to assess a property, set up a mosquito surveillance program, and advise on mosquito control options. This is especially true in those areas with already identified EEE.

For More Information:

Maine Centers for Disease Control:

<http://www.maine.gov/dhhs/boh/ddc/epi/vector-borne/index.shtml>

Maine Board of Pesticides Control:

<http://www.maine.gov/agriculture/pesticides/public/index.htm#mosquito>

Factoid

There are 42 known species of mosquitoes found in Maine.

The Maine School IPM Newsletter is also available online in pdf and html formats at:

<http://www.maine.gov/agriculture/pesticides/schoolipm/index.htm>

Web-based Resources for School IPM

Maine School IPM Program:
www.thinkfirstspraylast.org/schoolipm

National School IPM website:
<http://schoolipm.ifas.ufl.edu/INDEX.html>

IPM Institute of North America:
<http://www.ipminstitute.org/school.htm>



Training

Free School IPM Workshop at your School!

Yes, we make house calls. Do you have new staff needing IPM training or other staff needing an IPM refresher? Call us to schedule a free IPM workshop for your school district.

Got Pests? Fall is a active time for wasps, ants, rodents and cluster flies! This is an excellent time to assess your school's pest prevention, management, monitoring and record-keeping needs.

- * Download IPM checklists from the school IPM website and schedule a thorough inspection of your facilities.
- * Inspect for crevices that need sealing, window screens and doorsweeps needing repair, dumpsters needing replacement or relocation away from the doors, evidence of pests such as wasp nests or rodent droppings.

Pest Monitoring is an essential part of IPM that keeps your school a healthy place and reduces outbreaks.

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